CLAIMS:

1. An image sensor comprising a semiconductor body having a first conductivity type and having a surface, the surface being provided with a number of cells, a cell comprising a photosensitive element and a reset transistor, the reset transistor comprising a source region, a drain region and a gate region, the source region and the drain region having a second conductivity type opposite to the first, the source region of the reset transistor being electrically connected to the photosensitive element, wherein a well region is present which well region extends from the surface into the semiconductor body and extends at least partly below the gate region and the well region having a first conductivity type, the source region extending at least substantially in a doped region of the photosensitive element, the doped region having a second conductivity type.

2. An image sensor as claimed in claim 1, wherein the source region has a bottom area being at least partly delineated by the semiconductor body.

3. An image sensor as claimed in claim 1, wherein the drain region extends in the well region and a distance is present between the well region and the source region.

4. An image sensor as claimed in claim 3, wherein the gate region extends over a side-wall of the well region.

5. An image sensor as claimed in claim 1, wherein the gate is positioned along an edge of the photosensitive element.

6. An image sensor as claimed in claim 5, wherein a source follower transistor is present having a gate connected to the source of the reset transistor, the gate of the reset transistor having a length which is longer than the length of the gate of the source follower transistor.

7. A camera system comprising the image sensor as claimed in any of the preceding claims.

8. A method of manufacturing a CMOS image sensor comprising the steps of:

- forming a photosensitive element in a semiconductor substrate having a first conductivity type by providing dopant atoms into a region in the semiconductor substrate, the dopant atoms having a second conductivity type in the region opposite to the first conductivity type,

- using a protection mask over the region of the photosensitive element after which a well region is formed by implanting ions having a first conductivity type in the semiconductor substrate,

- forming a gate region by depositing a layer of gate material and patterning the layer, wherein the gate region is formed over a side-wall of the well region, the side-wall being present between the region of the photosensitive element and the well region.

9. A method as claimed in claim 8, wherein a source region is formed by implanting ions of a second conductivity type self-aligned to the gate, and the source region is at least substantially formed in the region of the photosensitive element.

10. A method as claimed in claim 8 or 9, wherein a distance is formed between the source region and the well region.

11. A method as claimed in claim 8 or 9, wherein field isolation is formed on the semiconductor substrate and the photosensitive element is formed by implantation of the ions of the second conductive type through the field isolation.

12. A method as claimed in claim 11, wherein the photosensitive element has an edge formed by the field isolation and the gate is positioned along that edge.